REMARKS

Further to the Notice of Appeal filed October 12, 2007, the Applicants now amend the claims as indicated above. In view of the above amendments and the following remarks, reconsideration of the rejections contained in the Office Action of April 12, 2007 is respectfully requested.

On page 2 of the Office Action, the Examiner rejected dependent claim 28 under 35 USC § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner asserted that there is no support in the original disclosure for the limitation requiring that the polishing surface of the polishing pad be attached to a lower surface of the support. However, the Examiner noted that the specification *does* support the polishing pad "as a whole" being attached to a lower surface of the support. The Examiner asserted that because "the polishing surface faces the wafer, it cannot be attached to the lower surface of the support, otherwise, it would not have contacted the processing surface of the substrate." However, the Applicants submit that the Examiner is reading limitations into the claims. Specifically, previously-pending claim 28 did not assert that the polishing surface is *directly attached* to the lower surface of the support, or that the polishing surface *directly contacts* the lower surface of the support. Because the polishing surface is part of the polishing pad, and because the polishing pad is attached to the lower surface of the support, the polishing surface is therefore also attached to the lower surface of the support (as taught in the original disclosure). Nonetheless, in an effort to hasten prosecution of this application, the Applicants have now amended independent claim 28 to simply recite that the polishing pad is attached to a lower surface of the support. It is submitted that this amendment overcomes the Examiner's formal rejection under section 112.

The Examiner rejected all of the pending claims in view of the prior art. In particular, the Examiner rejected claims 1-5 and 7-8 as being unpatentable over the Chen reference in view of the Kimura reference; rejected claim 6 as being unpatentable over the Chen reference in view of the Kimura reference and further in view of the Matsuda reference; rejected claims 9-13, 15-16, and 28-30 as being unpatentable over the Chen reference in view of the Kimura reference, and

further in view of the Talieh reference; and rejected claim 14 as being unpatentable over the Chen reference in view of the Kimura reference and the Talieh reference, and further in view of the Matsuda reference. However, the claims have now been amended as indicated above so as to clarify the present invention. For the reasons discussed below, it is respectfully submitted that the amended claims are clearly patentable over the prior art of record.

Amended independent claims 1 and 9 are both directed to an electrolytic processing apparatus including a substrate holder for holding a substrate, a first electrode to make contact with the substrate for passing electricity to the processing surface of the substrate, and an electrode head including a second electrode and a polishing surface facing the processing surface of the substrate. A relative movement mechanism is provided for moving the substrate holder and the electrode head relative to each other. In addition, a press mechanism includes a compression spring *arranged to apply a continuous elastic force between the relative movement mechanism and the electrode head* so as to press the polishing surface of the electrode head against the substrate held by the substrate holder.

A further description of the present invention as recited in amended independent claims 1 and 9 will now be provided with reference to various portions of the present application. However, reference to specific portions of the drawings and the specification is provided only for illustrative purposes, and is not intended to otherwise limit the scope of the claims to any particular embodiments.

The processing apparatus of amended independent claims 1 and 9 as discussed above is illustrated in Figures 11 and 12 and discussed on page 25, line 27 through page 26, line 11 of the original specification. As illustrated in Figures 11 and 12, the press mechanism 122 includes a compression spring 128 which is arranged so as to apply an elastic force between the relative movement mechanism 134,26 and the electrode head 28 (which includes the second electrode 98 and the polishing surface 120a). As a result of this arrangement, the compression spring 128 can ensure that there is adequate force pressing the polishing surface 120a against the substrate W. Furthmore, due to the arrangement of the compression spring 128 so as to apply continuous elastic force between the relative movement mechanism and the electrode head 28, the

compression spring 128 can be compressed so as to prevent excessive force from being applied by the relative movement mechanism against the processing surface of the substrate W.

In the outstanding Office Action, the Examiner noted that the Chen reference teaches an electrolytic processing apparatus including a substrate holder 478 (head assembly) for holding a substrate 422, and a first electrode 802 to make contact with the substrate 422 (see Figure 8). The Examiner also asserted that the Chen reference teaches a relative movement mechanism 468 (drive system) for pressing the polishing surface of the electrode head against the substrate, and which is capable of operating to hold the substrate 422 apart from the polishing surface or to hold the substrate 422 in contact with the polishing surface. Although the Examiner did not specifically identify a press mechanism in the Chen reference by reference number, the Examiner did assert that the Chen reference teaches a press mechanism including a spring 532 (see Figures 5 and 8).

As illustrated in, for example, Figure 5, the spring 532 is located between a mounting plate 530 and a support plate 506 *within the substrate holder* 478 (head assembly). In this regard, it is noted that the polishing surface 428 is located within the partial enclosure 434 *opposite* the substrate holder 478 (head assembly). Although the Examiner did not specifically identify an electrode head in the Chen reference, the Examiner identified a second electrode 426 and the polishing surface 428, and these items are both located within the partial enclosure 434. Thus, according to the Examiner's interpretation of the Chen reference, the partial enclosure 434 with the second electrode 426 and the polishing surface 428 apparently must constitute the electrode head of amended independent claims 1 and 9 for purposes of consistency. As such, it is clear that the spring 532 of the Chen reference <u>is not</u> arranged *to apply a continuous elastic force between a relative movement mechanism* (drive system 468, according to the Examiner) *and the electrode head* (partial enclosure 434, second electrode 426, and the polishing surface 428 according to the Examiner's interpretation).

Furthermore, as explained in paragraph [0094] of the Chen reference, the spring 532 biases the mounting plate 530 away from the support plate 506. In other words, at best, the spring 532 presses the *substrate* 422 held by the substrate holder 478, but <u>does not</u> press the

polishing surface against the substrate. Thus, it is submitted that the spring 532 of the Chen reference does not correspond to the compression spring arranged as recited in amended independent claims 1 and 9.

In addition to the Chen reference, the Kimura reference, the Matsuda reference, and the Talieh reference also do not teach or suggest a press mechanism including a compression spring arranged with respect to a relative movement mechanism and an electrode head as recited in amended independent claims 1 and 9. Therefore, this combination of references provides no apparent reason for one of ordinary skill in the art to obtain the electrolytic processing apparatus as recited in amended independent claims 1 and 9. Accordingly, it is respectfully submitted that amended independent claims 1 and 9 and the claims that depend therefrom are clearly patentable over the prior art of record.

The Examiner's attention is also directed to new dependent claims 31-34 which recite additional features of the present invention. Specifically, these claims recite additional structural elements of the relative movement mechanism and the press mechanism, as well as the relationship between these various structural elements. It is submitted that the prior art applied by the Examiner also does not teach or even suggest these features. Therefore, in addition to the reasons discussed above with respect to amended independent claims 1 and 9, dependent claims 31-34 are further distinguishable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. However, if the Examiner should have any comments or suggestions to help speed the prosecution of this application, the Examiner is requested to contact the Applicant's undersigned representative.

Respectfully submitted,

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